

| Ref # | Hits | Search Query   | DBs   | Default Operator | Plurals | Time Stamp       |
|-------|------|--|---|------------------|---------|------------------|
| L3    | 111  | magnet\$7 adj align\$5   | USPAT;<br>EPO; JPO;<br>DERWENT                          | OR               | OFF     | 2002/02/05 08:56 |
|       |      | ((438/15,110,113,114.ccls. and test\$3) and (dic\$5 or cut\$5) ) and (magnet\$7 adj align\$5)  | USPAT;<br>EPO; JPO;<br>DERWENT                          | OR               | OFF     | 2002/02/05 08:33 |
|       |      | ("5073840" "5817535" "5858815" "6426642" "6214716" "6188232" "6163956" "6150193" "6060891" "6004867".pn.) and test\$5 and (cut\$5 or dic\$6 or separat\$5 or saw\$4)   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR               | ON      | 2005/01/29 08:25 |
| L4    | 1    | ("20010052642").PN.  | US-PGPUB  | OR               | OFF     | 2005/01/29 08:25 |
| L5    | 17   | ((("5242855") or ("3918148") or ("6175084") or ("5134539") or ("6297553") or ("5143865") or ("6389689") or ("6479887") or ("6252298") or ("6268236") or ("20010052642") or ("6163956") or ("6153448") or ("6064217") or ("6344401") or ("4781969") or ("5137836")).PN. | US-PGPUB;<br>USPAT;<br>USOCR                            | OR               | OFF     | 2005/01/29 08:55 |
| S1    | 11   | ((("5242855") or ("3918148") or ("6175084") or ("5134539") or ("6297553") or ("5143865") or ("6389689") or ("6479887") or ("6252298") or ("6268236") or ("20010052642")).PN.   | US-PGPUB;<br>USPAT;<br>USOCR                            | OR               | OFF     | 2005/01/29 08:15 |
| S2    | 18   | 438/455,456,457,458,459,460,461,462,464.ccls. and test\$6 and (dic\$4) and magnetic\$6 and @ad<"20000616"  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR               | ON      | 2004/10/08 09:53 |
| S3    | 13   | 438/455,456,457,458,459,460,461,462,464.ccls. and align\$6 and test\$6 and (dic\$4) and magnetic\$6 and @ad<"20000616"   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR               | ON      | 2004/10/08 10:00 |
| S4    | 88   | "438"/\$.ccls. and align\$6 and test\$6 and (dic\$4) and magnetic\$6 and @ad<"20000616"  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR               | ON      | 2004/10/08 09:54 |
| S10   | 28   | 438/15,113,110,107,108,114,123,455,456,457,458,459,460,461,462,464.ccls. and align\$6 and test\$6 and (dic\$4) and magnetic\$6 and @ad<"20000616"  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR               | ON      | 2004/10/08 10:01 |

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| S11 | 1   | ("6165885").PN.  | US-PGPUB;<br>USPAT;<br>USOCR   | OR | OFF | 2004/10/08 11:34 |
| S12 | 348 | (438/15).CCLS.   | USPAT;<br>USOCR                | OR | OFF | 2004/04/08 08:51 |
| S13 | 258 | (438/113).CCLS.  | USPAT;<br>USOCR                | OR | OFF | 2002/07/03 08:58 |
| S14 | 94  | (438/110).CCLS.  | USPAT;<br>USOCR                | OR | OFF | 2002/07/03 08:58 |
| S15 | 59  | (438/114).CCLS.  | USPAT;<br>USOCR                | OR | OFF | 2002/07/03 08:58 |
| S16 | 681 | 438/15,110,113,114.ccls.   | USPAT                          | OR | OFF | 2002/12/19 14:38 |
| S17 | 401 | 438/15,110,113,114.ccls. and<br>test\$3  | USPAT                          | OR | OFF | 2001/08/07 15:09 |
| S18 | 272 | (438/15,110,113,114.ccls. and<br>test\$3) and (dice\$4 or cut\$5)  | USPAT                          | OR | OFF | 2001/08/07 15:10 |
| S19 | 901 | 438/15,110,113,114.ccls.   | USPAT;<br>EPO; JPO;<br>DERWENT | OR | OFF | 2002/02/04 09:53 |
| S20 | 460 | 438/15,110,113,114.ccls. and<br>test\$3  | USPAT;<br>EPO; JPO;<br>DERWENT | OR | OFF | 2002/02/04 09:54 |
| S21 | 325 | (438/15,110,113,114.ccls. and<br>test\$3) and (dic\$5 or cut\$5)   | USPAT;<br>EPO; JPO;<br>DERWENT | OR | OFF | 2004/10/06 09:25 |
| S22 | 5   | ((("6077757") or ("6335224") or<br>("6309943") or ("6309909") or<br>("6326697"))).PN.                                  | USPAT;<br>USOCR                | OR | OFF | 2004/04/08 10:12 |
| S23 | 7   | ((("6077757") or ("6335224") or<br>("6309943") or ("6309909") or<br>("6326697") or ("5858815") or<br>("5137836"))).PN. | USPAT;<br>USOCR                | OR | OFF | 2002/02/05 09:49 |
| S24 | 326 | (438/15,110,113,114.ccls. and<br>test\$3) and (dic\$5 or cut\$5)   | USPAT;<br>EPO; JPO;<br>DERWENT | OR | OFF | 2004/10/07 12:10 |
| S25 | 170 | ((438/15,110,113,114.ccls. and<br>test\$3) and (dic\$5 or cut\$5) ) and<br>(align\$5)                                  | USPAT;<br>EPO; JPO;<br>DERWENT | OR | OFF | 2002/02/05 08:32 |
| S29 | 248 | (magnet\$7 adj align\$5) and<br>semiconductor  | USPAT;<br>EPO; JPO;<br>DERWENT | OR | OFF | 2002/02/05 08:57 |
| S32 | 613 | (magnet\$7 adj align\$5) and ring  | USPAT;<br>EPO; JPO;<br>DERWENT | OR | OFF | 2002/02/05 08:50 |
| S33 | 47  | ((magnet\$7 adj align\$5) and ring)<br>and semiconductor   | USPAT;<br>EPO; JPO;<br>DERWENT | OR | OFF | 2002/02/05 08:51 |

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| S34 | 3066  | optically adj align\$5  | USPAT;<br>EPO; JPO;<br>DERWENT                          | OR | OFF | 2002/02/05 08:56 |
| S35 | 612   | (optically adj align\$5) and<br>semiconductor   | USPAT;<br>EPO; JPO;<br>DERWENT                          | OR | OFF | 2002/02/05 08:57 |
| S36 | 8     | ((("6077757") or ("6335224") or<br>("6309943") or ("6309909") or<br>("6326697") or ("5858815") or<br>("5137836") or ("4781969"))).PN. | USPAT;<br>USOCR   | OR | OFF | 2003/06/02 08:10 |
| S37 | 10260 | wood.inv.   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2002/07/03 08:13 |
| S38 | 539   | wood.inv. and alan  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2002/07/03 08:13 |
| S39 | 232   | (wood.inv. and alan) and (micron<br>adj technology)   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2002/07/03 08:14 |
| S40 | 1     | ("6268650").PN.   | USPAT;<br>USOCR   | OR | OFF | 2004/04/06 13:58 |
| S41 | 425   | (438/15).CCLS.  | USPAT;<br>USOCR   | OR | OFF | 2002/07/08 08:43 |
| S42 | 331   | (438/113).CCLS.   | USPAT;<br>USOCR   | OR | OFF | 2002/07/08 08:57 |
| S43 | 140   | (438/110).CCLS.   | USPAT;<br>USOCR   | OR | OFF | 2002/07/08 08:57 |
| S44 | 90    | (438/114).CCLS.   | USPAT;<br>USOCR   | OR | OFF | 2002/07/08 08:57 |
| S45 | 425   | (438/15).CCLS.  | USPAT;<br>USOCR   | OR | OFF | 2002/07/08 08:43 |
| S46 | 331   | (438/113).CCLS.   | USPAT;<br>USOCR   | OR | OFF | 2002/07/08 08:57 |
| S47 | 140   | (438/110).CCLS.   | USPAT;<br>USOCR   | OR | OFF | 2002/07/08 08:57 |
| S48 | 90    | (438/114).CCLS.   | USPAT;<br>USOCR   | OR | OFF | 2002/07/08 14:32 |

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| S49 | 13   | ((("6389689") or ("5977629") or ("5796170") or ("6326700") or ("6268650") or ("5858815") or ("5817535") or ("5770032") or ("4781969") or ("5073840") or ("5696033") or ("5834839") or ("6160714")).PN. | USPAT;<br>USOCR   | OR | OFF | 2002/07/08 10:35 |
| S50 | 8    | ((("6309909") or ("5858815") or ("5137836") or ("6077757") or ("6326697") or ("6165885") or ("5834320") or ("4781969")).PN.  | USPAT;<br>USOCR   | OR | OFF | 2002/07/09 09:56 |
| S53 | 19   | wafer adj (bond\$3 or attach\$3)<br>near4 (dielectric adj (layer or film))   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2002/12/19 14:07 |
| S55 | 963  | 438/15,110,113,114.ccls.   | USPAT   | OR | OFF | 2002/12/19 14:38 |
| S56 | 1212 | 438/15,110,113,114.ccls.   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2002/12/19 14:38 |
| S58 | 9    | (wafer adj (dielectric adj (layer or film))) same test\$3  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2002/12/20 08:18 |
| S59 | 13   | ((("5834839") or ("6389689") or ("6160714") or ("5977629") or ("6326700") or ("6268650") or ("5858815") or ("5817535") or ("5770032") or ("5796170") or ("4781969") or ("5073840") or ("5696033")).PN. | USPAT;<br>USOCR   | OR | OFF | 2002/12/19 15:19 |
| S60 | 85   | wafer same dielectric same test\$3<br>same (cut\$3 or dic\$3 or slic\$3)   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2002/12/20 08:42 |
| S61 | 78   | (wafer same dielectric same test\$3<br>same (cut\$3 or dic\$3 or slic\$3))<br>and semiconductor  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2002/12/20 09:38 |
| S62 | 348  | (wafer same (dielectric adj (layer or film))) same test\$3   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2002/12/20 09:35 |

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| S63 | 322  | ((wafer same (dielectric adj (layer or film))) same test\$3 ) and semiconductor  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2002/12/20 09:38 |
| S64 | 98   | ((((wafer same (dielectric adj (layer or film))) same test\$3 ) and semiconductor) and (cut\$3 or dic\$3)  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2002/12/20 09:39 |
| S65 | 1    | ("6424023").PN.  | USPAT;<br>USOCR   | OR | OFF | 2002/12/20 10:24 |
| S66 | 3    | ((("5897337") or ("5858815") or ("6389689")).PN.   | USPAT;<br>USOCR   | OR | OFF | 2002/12/23 11:53 |
| S67 | 2    | ((("5897337") or ("6389689")).PN.  | USPAT;<br>USOCR   | OR | OFF | 2002/12/23 11:53 |
| S68 | 9187 | ((balls adj grid adj arrays) or (BGA)) and semiconductor   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2003/05/20 07:59 |
| S69 | 4418 | ((((balls adj grid adj arrays) or (BGA)) and semiconductor) and (dic\$4 or cut\$4 or separat\$5)   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2003/05/20 08:02 |
| S70 | 4476 | ((((balls adj grid adj arrays) or (BGA)) and semiconductor) and (dic\$4 or cut\$4 or separat\$5 or saw\$4)   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2003/05/20 08:04 |
| S71 | 955  | (((((balls adj grid adj arrays) or (BGA)) and semiconductor) and (dic\$4 or cut\$4 or separat\$5)) and (metal adj (film or layer))                                 | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2003/05/20 08:04 |
| S72 | 970  | (((((balls adj grid adj arrays) or (BGA)) and semiconductor) and (dic\$4 or cut\$4 or separat\$5 or saw\$4)) and (metal adj (film or layer))                       | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2003/05/20 08:04 |
| S73 | 1    | ("20010052642").PN.  | US-PGPUB;<br>USOCR                                      | OR | OFF | 2003/05/20 08:12 |
| S74 | 472  | wafer and (metal adj (film or layer)) and (attach\$5 or bond\$4) and ((balls adj grid adj arrays) or (BGA)) and semiconductor and (dic\$4 or cut\$4 or separat\$5) | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2003/05/20 08:52 |

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| S75 | 233 | (wafer and (metal adj (film or layer)) and (attach\$5 or bond\$4) and ((balls adj grid adj arrays) or (BGA)) and semiconductor and (dic\$4 or cut\$4 or separat\$5)) and @ad<="20000616"  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2004/01/12 08:09 |
| S76 | 212 | ((wafer and (metal adj (film or layer)) and (attach\$5 or bond\$4) and ((balls adj grid adj arrays) or (BGA)) and semiconductor and (dic\$4 or cut\$4 or separat\$5)) and @ad<="20000616") and (dic\$5 or cut\$6 or saw\$5)                         | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2003/05/21 08:23 |
| S77 | 206 | ((wafer and (metal adj (film or layer)) and (attach\$5 or bond\$4) and ((balls adj grid adj arrays) or (BGA)) and semiconductor and (dic\$4 or cut\$4 or separat\$5)) and @ad<="20000616") and (dic\$5 or cut\$6)                                   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2003/05/20 09:06 |
| S78 | 1   | ((wafer adj semiconductor) same (metal adj (film or layer)) same (attach\$5 or bond\$4) same ((balls adj grid adj arrays) or (BGA)) same (dic\$4 or cut\$4 or separat\$5)) same (dic\$5 or cut\$6 or saw\$5)) and @ad<="20000616"                   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2003/05/20 10:06 |
| S79 | 212 | ((wafer and (metal adj (film or layer)) and (attach\$5 or bond\$4) and ((balls adj grid adj arrays) or (BGA)) and semiconductor and (dic\$4 or cut\$4 or separat\$5)) and @ad<="20000616") and (dic\$5 or cut\$6 or saw\$5)                         | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2003/05/21 09:00 |
| S80 | 172 | ((wafer and (metal adj (film or layer)) and (attach\$5 or bond\$4) and ((balls adj grid adj arrays) or (BGA)) and semiconductor and (dic\$4 or cut\$4 or separat\$5)) and @ad<="20000616") and (dic\$5 or cut\$6 or saw\$5) ) and dic\$5            | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2003/05/21 09:24 |
| S81 | 92  | ((wafer and (metal adj (film or layer)) and (attach\$5 or bond\$4) and ((balls adj grid adj arrays) or (BGA)) and semiconductor and (dic\$4 or cut\$4 or separat\$5)) and @ad<="20000616") and (dic\$5 or cut\$6 or saw\$5) ) and (dicing or diced) | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON | 2003/05/21 09:35 |

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| S82 | 70  | (((((wafer and (metal adj (film or layer)) and (attach\$5 or bond\$4) and ((balls adj grid adj arrays) or (BGA)) and semiconductor and (dic\$4 or cut\$4 or separat\$5)) and @ad<="20000616") and (dic\$5 or cut\$6 or saw\$5) ) and (dicing or diced)) and (individual\$3 or each)    | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2003/05/21 09:36 |
| S83 | 70  | (((((wafer and (metal adj (film or layer)) and (attach\$5 or bond\$4) and ((balls adj grid adj arrays) or (BGA)) and semiconductor and (dic\$4 or cut\$4 or separat\$5)) and @ad<="20000616") and (dic\$5 or cut\$6 or saw\$5) ) and (dicing or diced)) and (individual\$3)            | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2003/05/21 09:36 |
| S84 | 6   | (((((wafer and (metal adj (film or layer)) and (attach\$5 or bond\$4) and ((balls adj grid adj arrays) or (BGA)) and semiconductor and (dic\$4 or cut\$4 or separat\$5)) and @ad<="20000616") and (dic\$5 or cut\$6 or saw\$5) ) and (dicing or diced)) and (individual\$3 adj device) | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2003/05/21 09:37 |
| S85 | 2   | ((("6344401") or ("6566745")).PN.  | USPAT;<br>USOCR   | OR | OFF | 2004/01/12 07:56 |
| S86 | 241 | (wafer and (metal adj (film or layer)) and (attach\$5 or bond\$4) and ((balls adj grid adj arrays) or ("BGA")) and semiconductor and (dic\$4 or cut\$4 or separat\$5)) and @ad<="20000616"   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2004/01/12 08:10 |
| S87 | 1   | ((wafer same (metal adj (film or layer)) same (attach\$5 or bond\$4) same ((balls adj grid adj arrays) or ("BGA")) same semiconductor same (dic\$4 or cut\$4 or separat\$5))) and @ad<="20000616"  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2003/10/23 10:36 |
| S88 | 2   | ((("6153448") or ("20020011859")).PN.  | US-PGPUB;<br>USPAT;<br>USOCR                            | OR | OFF | 2003/10/24 12:35 |
| S89 | 4   | ((("6153448") or ("20020011859") or ("6064217") or ("5475317")).PN.  | US-PGPUB;<br>USPAT;<br>USOCR                            | OR | OFF | 2003/10/24 14:07 |
| S90 | 3   | ((("6344401") or ("6165885") or ("5834320")).PN.   | USPAT;<br>USOCR   | OR | OFF | 2004/01/12 09:14 |

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| S91 | 244 | (wafer and (metal adj (film or layer)) and (attach\$5 or bond\$4) and ((balls adj grid adj arrays) or (BGA)) and semiconductor and (dic\$4 or cut\$4 or separat\$5)) and @ad<="20000616"                                   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB           | OR | ON  | 2004/01/12 08:03 |
| S92 | 244 | (wafer and (metal adj (film or layer)) and (attach\$5 or bond\$4) and ((balls adj grid adj arrays) or (BGA)) and semiconductor and (dic\$4 or cut\$4 or separat\$5)) and @ad<="20000616"                                   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB           | OR | ON  | 2004/04/06 08:33 |
| S93 | 166 | ((wafer and (metal adj (film or layer)) and (attach\$5 or bond\$4) and ((balls adj grid adj arrays) or (BGA)) and semiconductor and (dic\$4 or cut\$4 or separat\$5)) and @ad<="20000616" ) and align\$6                   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB           | OR | ON  | 2004/01/12 08:05 |
| S94 | 688 | (438/455).CCLS.  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2004/01/12 08:08 |
| S95 | 12  | 438/455,456,457,458,459,460,461,462,464.ccls. and (wafer and (metal adj (film or layer)) and (attach\$5 or bond\$4) and ((balls adj grid adj arrays) or ("BGA")) and (dic\$4 or cut\$4 or separat\$5)) and @ad<="20000616" | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB           | OR | ON  | 2004/10/06 09:26 |
| S96 | 97  | "438"/\$.ccls. and (wafer and (metal adj (film or layer)) and (attach\$5 or bond\$4) and ((balls adj grid adj arrays) or ("BGA")) and (dic\$4 or cut\$4 or separat\$5)) and @ad<="20000616"                                | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB           | OR | ON  | 2004/10/06 09:23 |
| S97 | 348 | (wafer and ((metal or conductive) adj (film or layer)) and (attach\$5 or bond\$4) and ((balls adj grid adj arrays) or (BGA)) and semiconductor and (dic\$4 or cut\$4 or separat\$5)) and @ad<="20000616"                   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB           | OR | ON  | 2004/04/06 08:36 |
| S98 | 229 | ((wafer and ((metal or conductive) adj (film or layer)) and (attach\$5 or bond\$4) and ((balls adj grid adj arrays) or (BGA)) and semiconductor and (dic\$4 or cut\$4 or separat\$5)) and @ad<="20000616" ) and test\$4    | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB           | OR | ON  | 2004/04/06 08:36 |



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| S99      | 85 | ((wafer and ((metal or conductive) adj (film or layer)) and (attach\$5 or bond\$4) and ((balls adj grid adj arrays) or (BGA)) and semiconductor and (dic\$4 or cut\$4 or separat\$5)) and @ad<="20000616" ) and test\$4) and (input same output)   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2004/04/06 08:37 |
| S10<br>0 | 86 | ((wafer and ((metal or conductive) adj (film or layer)) and (attach\$5 or bond\$4) and ((balls adj grid adj arrays) or (BGA)) and semiconductor and (dic\$4 or cut\$4 or separat\$5)) and @ad<="20000616" ) and test\$4) and (input and output)  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2004/04/06 08:44 |
| S10<br>1 | 78 | ((((wafer and ((metal or conductive) adj (film or layer)) and (attach\$5 or bond\$4) and ((balls adj grid adj arrays) or (BGA)) and semiconductor and (dic\$4 or cut\$4 or separat\$5)) and @ad<="20000616" ) and test\$4) and (input and output)) and (cut\$5 or dic\$6)                              | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2004/04/06 11:21 |
| S10<br>2 | 24 | (((((wafer and ((metal or conductive) adj (film or layer)) and (attach\$5 or bond\$4) and ((balls adj grid adj arrays) or (BGA)) and semiconductor and (dic\$4 or cut\$4 or separat\$5)) and @ad<="20000616" ) and test\$4) and (input and output)) and (cut\$5 or dic\$6)) and (conductive adj trace) | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2004/04/06 11:21 |
| S10<br>3 | 5  | ((("5858815") or ("4781969") or ("5073840") or ("5770032") or ("5817535")).PN.   | USPAT;<br>USOCR   | OR | OFF | 2004/04/08 13:56 |
| S10<br>4 | 10 | ((("5073840") or ("5817535") or ("5858815") or ("6426642") or ("6214716") or ("6188232") or ("6163956") or ("6150193") or ("6060891") or ("6004867")).PN.  | USPAT;<br>USOCR   | OR | OFF | 2004/04/08 13:29 |
| S10<br>5 | 10 | ((("5073840" "5817535" "5858815" "6426642" "6214716" "6188232" "6163956" "6150193" "6060891" "6004867").pn.) and test\$5 and (cut\$5 or dic\$6 or separat\$5 or saw\$4)  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2004/04/08 09:30 |

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| S10<br>6 | 6    | ((("5073840" "5817535" "5858815" "6426642" "6214716" "6188232" "6163956" "6150193" "6060891" "6004867").pn.) and test\$5 and (cut\$5 or dic\$6 or separat\$5 or saw\$4)) and cut\$6 | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB           | OR | ON  | 2004/04/08 09:30 |
| S10<br>7 | 1134 | "438"/\$.ccls. and test\$6 and (dic\$4) and @ad<"20000616"  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB           | OR | ON  | 2004/10/06 09:25 |
| S10<br>8 | 2169 | "257"/\$.ccls. and test\$6 and (dic\$4) and @ad<"20000616"  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB           | OR | ON  | 2004/10/06 09:25 |
| S10<br>9 | 203  | 438/15,110,113,114.ccls. and test\$6 and (dic\$4) and @ad<"20000616"  | USPAT;<br>EPO; JPO;<br>DERWENT                                    | OR | OFF | 2004/10/06 09:25 |
| S11<br>0 | 199  | 438/455,456,457,458,459,460,461,462,464.ccls. and test\$6 and (dic\$4) and @ad<"20000616"   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB           | OR | ON  | 2004/10/08 09:53 |
| S11<br>1 | 2    | ("6261919").PN.   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2004/10/06 13:56 |
| S11<br>2 | 2    | ("6429530").PN.   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2004/10/07 08:13 |
| S11<br>3 | 7    | ((("6163956") or ("6153448") or ("6064217") or ("6344401") or ("4781969") or ("5137836") or ("20010052642"))).PN.   | US-PGPUB;<br>USPAT;<br>USOCR                                      | OR | OFF | 2004/10/07 10:04 |
| S11<br>4 | 1    | ("5989982").PN.   | US-PGPUB;<br>USPAT;<br>USOCR                                      | OR | OFF | 2004/10/07 13:52 |
| S11<br>5 | 1    | ("5897334").PN.   | US-PGPUB;<br>USPAT;<br>USOCR                                      | OR | OFF | 2004/10/07 13:52 |
| S12<br>1 | 1    | ("6242808").PN.   | USPAT;<br>USOCR   | OR | OFF | 2002/07/09 09:57 |
| S12<br>4 | 1    | ("6461891").PN.   | USPAT;<br>USOCR   | OR | OFF | 2003/05/21 09:19 |

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| S12<br>5 | 1     | ("6232663").PN.   | USPAT;<br>USOCR   | OR | OFF | 2003/06/02 09:05 |
| S12<br>6 | 1     | ("6417047").PN.   | USPAT;<br>USOCR   | OR | OFF | 2003/06/02 09:37 |
| S12<br>7 | 1     | ("6613669").PN.   | US-PGPUB;<br>USPAT;<br>USOCR                                      | OR | OFF | 2003/10/24 14:07 |
| S12<br>9 | 21720 | "438"/\$.ccls. and align\$5 and<br>@ad<="20000616"  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB           | OR | ON  | 2004/01/12 08:10 |
| S14<br>2 | 913   | 257/276,625,675,706,717,718,720,<br>722,796.ccls. and (heat adj sink)<br>and fins and @ad<="20020311"   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB           | OR | ON  | 2004/04/08 09:15 |
| S14<br>3 | 66    | 257/276,625,675,706,717,718,720,<br>722,796.ccls. and (heat adj sink)<br>and fins and @ad<="20020311"<br>and (planar adj surface)   | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB           | OR | ON  | 2004/04/08 09:15 |
| S14<br>4 | 76    | 438/122,123.ccls. and (heat adj<br>sink) and fins and<br>@ad<="20020311"  | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB           | OR | ON  | 2004/04/08 09:16 |
| S14<br>5 | 96    | ("5073840" "5817535" "5858815"<br>"6426642" "6214716" "6188232"<br>"6163956" "6150193" "6060891"<br>"6004867".pn.) and test\$5 and<br>(cut\$5 or dic\$6 or seperat\$5 or<br>saw\$4) | US-PGPUB;<br>USPAT;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB           | OR | ON  | 2004/04/08 09:29 |
| S14<br>7 | 2     | ((("6113724") or ("20020181224")).<br>PN.   | US-PGPUB;<br>USPAT;<br>USOCR                                      | OR | OFF | 2004/04/08 10:17 |
| S14<br>8 | 1     | ("4752858").PN.   | USPAT;<br>USOCR   | OR | OFF | 2004/04/08 13:30 |
| S14<br>9 | 1     | ("6314639").PN.   | USPAT;<br>USOCR   | OR | OFF | 2004/04/08 13:56 |
| S15<br>0 | 16    | ((("5242855") or ("3918148") or<br>("6175084") or ("5134539") or<br>("6297553") or ("5143865") or<br>("6389689") or ("6479887"))).PN.   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2004/10/06 12:01 |

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| S15<br>2 | 12  | ((("6163956") or ("6153448") or ("6064217") or ("6334401") or ("4781969") or ("5137836"))).PN.  | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2004/10/07 08:15 |
| S15<br>5 | 8   | ((("5242855") or ("3918148") or ("6175084") or ("5134539") or ("6297553") or ("5143865") or ("6389689") or ("6479887"))).PN.                    | USPAT;<br>USOCR   | OR | OFF | 2004/10/07 10:06 |
| S16<br>1 | 105 | 438/106,107,110,113,114.ccls. and metal and (through-hole)  | USPAT;<br>EPO; JPO;<br>DERWENT                                    | OR | OFF | 2004/10/07 12:30 |
| S16<br>2 | 730 | "438"/\$.ccls. and metal and (through-hole)   | USPAT;<br>EPO; JPO;<br>DERWENT                                    | OR | OFF | 2004/10/07 12:31 |
| S16<br>3 | 429 | "257"/\$.ccls. and (metal near10 (through-hole))  | USPAT;<br>EPO; JPO;<br>DERWENT                                    | OR | OFF | 2004/10/07 12:32 |
| S16<br>4 | 978 | semiconductor and (metal near10 (through-hole))   | USPAT;<br>EPO; JPO;<br>DERWENT                                    | OR | OFF | 2004/10/07 12:32 |
| S16<br>5 | 214 | "438"/\$.ccls. and (metal near10 (through-hole))  | USPAT;<br>EPO; JPO;<br>DERWENT                                    | OR | OFF | 2004/10/07 12:13 |
| S16<br>6 | 103 | 438/106,107,110,113,114.ccls. and metal and (through-hole) and (chip or die or dice or ((integrated adj circuit) or ("IC")))                    | USPAT;<br>EPO; JPO;<br>DERWENT                                    | OR | OFF | 2004/10/07 12:31 |
| S16<br>7 | 512 | "438"/\$.ccls. and metal and (through-hole) and (chip or die or dice or ((integrated adj circuit) or ("IC")))                                   | USPAT;<br>EPO; JPO;<br>DERWENT                                    | OR | OFF | 2004/10/07 12:32 |
| S16<br>8 | 332 | "257"/\$.ccls. and (metal near10 (through-hole)) and (chip or die or dice or ((integrated adj circuit) or ("IC")))                              | USPAT;<br>EPO; JPO;<br>DERWENT                                    | OR | OFF | 2004/10/07 12:32 |
| S16<br>9 | 535 | semiconductor and (metal near10 (through-hole)) and (chip or die or dice or ((integrated adj circuit) or ("IC")))                               | USPAT;<br>EPO; JPO;<br>DERWENT                                    | OR | OFF | 2004/10/07 12:32 |
| S17<br>0 | 9   | ((("5242855") or ("3918148") or ("6175084") or ("5134539") or ("6297553") or ("5143865") or ("6389689") or ("6479887") or ("20010052642"))).PN. | US-PGPUB;<br>USPAT;<br>USOCR                                      | OR | OFF | 2004/10/07 14:03 |

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| S17<br>1 | 2  | ("5242855").PN.   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2004/10/06 13:47 |
| S17<br>2 | 2  | ("6268236").PN.   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2004/10/08 09:19 |
| S17<br>3 | 10 | ((("5242855") or ("3918148") or<br>("6175084") or ("5134539") or<br>("6297553") or ("5143865") or<br>("6389689") or ("6479887") or<br>("6252298") or ("20010052642")).<br>PN. | US-PGPUB;<br>USPAT;<br>USOCR                                      | OR | OFF | 2004/10/08 09:29 |